DOCUMENT RESUME

ED 407 546 CE 073 972

AUTHOR Sherritt, Caroline; Basom, Margaret
TITLE Using the Internet for Higher Education.
PUB DATE May 97
NOTE 16p.
PUB TYPE Opinion Papers (120)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adult Education; *Computer Mediated Communication; *Distance Education; Educational Quality; *Educational Technology; Electronic Mail; Higher Education; *Internet; Program Effectiveness; Technological Advancement

ABSTRACT

Use of the Internet by colleges and universities for delivery of distance education is one trend likely to continue. Unlike previous educational trends driven by research and tradition inside the academic community, Internet use for education is enthusiastically supported by forces outside of academe. The most widely used practices are formal courses, self-directed learning, online lecture notes, newsgroups, electronic mail, interactive video, and virtual reality. Both advantages and limitations accrue to Internet learners, educators, and institutions. The economy of scale possible from classes offered to hundreds or thousands of learners is balanced by the enormous costs of establishing and maintaining an infrastructure to manage it. The advantage to learners of acquiring customized education at their convenience is offset by the need for expensive equipment to access frequently fragmented curriculum that often operates at a low level recognition and recall level. The intrinsic rewards to faculty of expanded access and new revenue sources is mitigated by a reward system that does not recognize excellence in technological and/or distance teaching. The list of established universities adopting or seeking to adopt Web courses for distance delivery is staggering. These issues are yet to be well researched: copyright, cost effectiveness, quality of learning, accreditation, access, collaboration, faculty rewards, curriculum, market forces, assessment, and values-centered experiences. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 407 546

USING THE INTERNET FOR HIGHER EDUCATION

Caroline Sherritt, Ph. D.
Faculty of Adult Education and Technology

Margaret Basom, Ph. D.
Faculty of Education Leadership

College of Education
University of Wyoming
Laramie, WY 82071
USA

May 97

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

C Sherritt

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

CE 073772

BEST COPY AVAILABLE

USING THE INTERNET IN HIGHER EDUCATION

The use of telecommunications for education purposes requires profound changes in the ways intellectual information is conceptualized, valued, disseminated, funded, and governed.

No one knows what Internet education is, where it came from, what it can do, or whether its presence is benign or hostile.

Education trends come and go. However, using the Internet to deliver education and training at a distance is one trend likely to be around for a while. Changes in employment and technology require workers to engage in continuous learning to a degree never before experienced. Most workers are mature with family and job responsibilities that prevent attendance in classes on university and college campuses where employment useful education and training take place and credentials are conferred. Hence, there is a huge global market for education and training that can be accessed at home or on the job. The Internet is positioned to meet this challenge but use of telecommunications for educational purposes requires profound changes in the way intellectual information is conceptualized, valued, disseminated, and governed.

Although the Internet was developed on university campuses and remains mostly a province of higher education, using it to deliver education at a distance is more influenced by forces outside of academe than any other education trend in recent memory or, perhaps, ever. Mingle (1995) posited five driving forces for Internet education; they are:

1. Vendors (boys with toys)
2. Early adopters (mostly university people enchanted with technology)
3. Competition among institutions

BEST COPY AVAILABLE

4. Student enthusiasm for the medium

5. Cost cutting policy makers

Heretofore, higher education programs, procedures, and policies evolved from tradition and research in academic fields with a salutary nod to societal demands. Proliferation of electronic distance education is propelled by global economic competition, non-traditional learners, labor force requirements, bewitched computer users, high technology industries, and politicians. Like a plot for a science fiction novel, the Internet is an alien life form that has landed on campus. No one knows what it is, where it came from, what it can do, or whether its presence is benign or hostile. Some individuals believe the best; others are threatened.

This paper presents results of an extensive literature review on Internet education that addressed the following:

- Current practices in Internet education in higher education;
- Advantages and limitations to learners, faculty, and institutions;
- Internet learning myths;
- Trends and issues in the field.

BEST COPY AVAILABLE

Current Practices in Internet Education in Higher Education

Formal learning on the Internet takes many forms and extends from classes and programs offered entirely online to those that are only supported by computer use. There are three common online applications: 1) electronic messaging (listservers, newsgroups, and net-conferencing), 2) Web applications, and 3) real time group conferencing. These applications undergird the most widely used current practices:

- Formal courses with regular meeting times and places (*synchronous* learning);
- Self directed learning in which students tap into materials on the Internet at their own pace and in their own time (*asynchronous* learning);
- Online lecture notes;
- Newsgroups for class discussions and announcements;
- Email for interaction between students to students and students to instructors;
- Interactive video;
- Virtual reality including three dimensional use of graphics presentations that may or may not be interactive;
- Combinations of the above with or without campus residence requirements or use of other media such as compressed video, audio-telecoferencing, or satellite delivery.

BEST COPY AVAILABLE

Advantages and Limitations to Learners, Faculty, and Institutions

Solid research on any aspect of Internet education is practically non-existent

Learners

Advantages noted in the literature for Internet learners evolve from observation and anecdotes rather than grounded theory. For example, learning on the Internet provides a) flexibility, b) the opportunity to interact with classmates and instructors any place in the world using real time, c) more educational choices with a broad range of resources, d) opportunities to customize education, e) home and work based study, and f) immediate access to print materials. Some educators tout the value of the Internet for self-directed and visual learners, although solid research support for these opinions is missing. Indeed, solid research on any aspect of Internet education is practically non-existent.

Despite apparent advantages, Internet students are faced with the high cost of equipment, lack of technical support in the home or workplace, a continuous need to learn new skills, a plethora of available unscrupulous programs, and fragmented learning modules that do not resemble acceptable basic Western education. There are, as well, communications problems for Internet learners that include a sense of isolation and lack of visual cues typical of face to face interaction. Some educators question the capacity of potential Internet students, particularly relatively young ones, to make intelligent choices about their learning programs and exhibit self-direction.

BEST COPY AVAILABLE

Institutions and Faculty

The advantages for institutions and faculty using the Internet to deliver instruction at a distance must be measured against the disadvantages. Advantages include, but are not limited to:

- Faster dissemination, revision, and distribution of materials;
- Ability to track students' daily progress;
- Access to potential sources of new revenues;
- Collaboration with other education institutions, government agencies, business and industry;
- Access to worldwide resources;
- Expanded diverse audiences.

Disadvantages include, but are not limited to:

- The exorbitant costs of creating and maintaining an infrastructure to utilize the Internet;
- Problems for instructors who must learn and use new skills in an environment which does not reward excellence in distance instruction (Caffarella et al 1996, Sherritt 1996);
- A need to reconceptualize the purposes of education as well as standards for funding, evaluation, teaching and research protocols, tenure and promotion criteria and more (education critics do not consider this a disadvantage);
- Technological restrictions such as I) limited bandwidth that militates against fast multimedia presentations and II) interactive software that is in the technological dark age of development;
- Limitations in using media at a distance to effect changes in learner consciousness;
- Limitations on spontaneous interaction.

BEST COPY AVAILABLE

The Myths of Internet Learning

It is naïve to think that all college/ university classes spark truth and all teachers inspire awe. It may be that electronically delivered education offers different but no less compelling learning challenges with more relevance for modern consciousness.

Sell (1997) identified three myths surrounding the use of the Internet for education purposes.

1. Information and knowledge are synonymous;
2. Providing information is the same as providing education;
3. More information results in more learning.

Of particular concern to educators is the implicit belief that speedy access to lots of information equals learning. Teachers know that magic occasionally happens in the classroom and students are able to take information, process it, and change it into something meaningful. Students know the excitement of listening to an inspiring teacher. However, it is naïve to think that all college/ university classes spark truth and all teachers inspire awe; most do not. It may be that electronically delivered education offers different but no less compelling learning challenges yet to be discovered with more relevance for modern consciousness. It may also be that the Internet is most appropriate for training, that it supports recognition and recall rather than consciousness raising and socialization. This is an area in need of serious attention; it lies at the heart of resistance to distance education, in general, and Internet education specifically.

BEST COPY AVAILABLE

Trends in Higher Education and Learning on the Internet

The list of established universities adopting or seeking to adopt

Web courses for distance delivery is staggering.

- Virtual universities and virtual classrooms are proliferating.
- Proprietary institutions, such as the University of Phoenix, are emerging with the singular purpose of providing distance education;
- Non-credit, non-accredited virtual universities, such as Athena, can be found online.
- Digital networks that transmit voice, video, and data over the same lines are being supported by the federal government. NII (National Information Infrastructure) is a priority for the current administration but is bogged down with the *Last Mile Problem* of how to hook up every residence, agency, and school at the estimated cost of fifty to one hundred billion dollars.
- There is increased global competition in and pressure on higher education to jump on the Internet bandwagon. The British Open University has discovered the Internet; the University of South Africa offers online courses to thousands worldwide; Paisley University of Scotland, with a branch in Hong Kong, is competing for Pacific Rim business; Dartmouth University in the U. S. is delivering accredited graduate programs online; Stanford, on the other coast, is investing in the future of Internet instruction. The list of established, traditional colleges and universities adopting or seeking to adopt Web courses for distance delivery is staggering.

- While the Internet was developed on American campuses and continues to be largely

BEST COPY AVAILABLE

- While the Internet was developed on American campuses and continues to be largely the purview of universities, this will not always be the case. Systematic commercialization of the Internet is purposely supported by the United States government Some believe this will drive down costs; others believe it will drive up costs for non-profit institutions. The U. S. Telecommunications Act of 1996 does not protect higher education access to communications technology.
- It is likely the computer industry will continue to develop interactive software for educational purposes.
- Interstate and international consortia, as well as public- private partnerships for education collaboration are essential to effective and efficient use of the Internet for education.
- The Internet will continue to change teaching and learning. Quintana (1996) defined these changes as shifts from classroom lectures to networked access to resources, student as passive recipient of education to self-directed learner, individual to team learning and group discussion, and homogeneous and stable educational content to fast changing content presented in wide formats (p. 4).

Issues in Internet Education

No one has yet found a way to protect intellectual property put online.

The old rules about cheating are obsolete in cyberspace.

Electronically delivered distance education poses its own problems and issues emerge faster than legislators and policy makers can address them. In a seminal stage, literature in the field attempts to define the problems but offers few solutions. Following is a list of topics around which Internet issues currently revolve:

BEST COPY AVAILABLE

1. *Copyright*

   No one has yet found a way to protect intellectual property put online.

2. *Cost Effectiveness*

   Administrators are now asking whether distance delivery via technology is cheaper than on campus delivery of instruction. This is probably the wrong question and there are few data with which to answer it. A better question might be: How does funding for distance education diverge from funding for traditional education? There are economic indicators but the big picture is elusive. For example, costs of providing on campus education are ascending and costs of technology (at least now) are descending. On the other hand, the expense of establishing and maintaining an infrastructure to deliver electronic instruction at a distance are immense. Students will probably not save on tuition costs but will save on travel and time away from home and work A better trained and educated workforce has strong economic consequences. The cost of electronic publishing is cheaper than paper publishing. However, it simply is not known what these facts mean in the grand scheme of higher education resources.

3. *Quality of Learning*

   There is insufficient research into learning on the Internet and few controls over inferior programs.

BEST COPY AVAILABLE

4. *Accreditation*

Accreditation poses questions for Internet educators and learners. Are current accreditation guidelines appropriate for Internet education? How important is accreditation really? Should new organizations be charged with developing Internet standards for education or can existing accreditation agencies modify their extant criteria?

5. *Access*

Will access to and skills with computers be requisite to acquiring lifelong education? How much responsibility should educators assume for bridging the gap between the haves and have nots?

6. *Collaboration Across Local, State, and National Boundaries*

Historically education institutions have been competitive, deriving resources and power from maintaining turf. The Internet challenges this paradigm and the allocation of resources. For example, funding goes to approved institutions, not to approved students. What happens when a student earns a degree online from taking a patchwork of classes from various colleges and universities. This model is embraced by the incipient virtual Western Governor's University and the established International Technological University, an accredited virtual graduate school drawing classes from over fifty universities and delivering them to the United States and Pacific Rim.

7. *Faculty Rewards*

Online, distance higher education will be as effective as the faculty who participate in it. Research (Caffarella et al 1996, Sherritt 1993) indicates that faculty members are not extrinsically rewarded for participation in distance education. In fact, teaching at a distance

BEST COPY AVAILABLE

takes time away from service and research that are used to make tenure and promotion decisions (Sherritt, 1996).

8. *Curriculum*

Internet education is necessarily modularized and works best with an outcomes based model. In addition, the separation of higher education from the world of work becomes more diffused in Internet programs which tend to focus on relevant and contextual curriculum. The issue is whether this change in curriculum focus for Internet education is likely to affect curricular decisions on campus.

9. *Market Forces*

Internet education is largely market driven as illustrated in a priority established by the State of Florida for funding telecommunications courses: they must "become highly cost-effective" (p. 1). The target population is unlikely to pay for courses that do not meet real life needs. On the other hand, revenue generated by distance graduate programs can help to revive moribund programs in abstruse areas, such as Medieval studies, and also draw together a critical mass of students from around the globe for a highly specialized area.

10. Assessment

The old rules about cheating and plagiarizing are obsolete in cyberspace where individuals are rewarded for networking and accessing information. On the Internet, where information cannot be controlled, it is impossible to ensure that a learner has done individual work. Many see this as a big problem; others see it as a challenge to find new ways to

BEST COPY AVAILABLE

evaluate student progress. Evaluation of programs is another problem yet to be adequately addressed.

11. *Values Centered Experiences*

A traditional college education does more than provide information; it also socializes and inculcates values deemed necessary for educated people in a given culture. If universities no longer acculturate people into the educated elite, is this a problem?

CONCLUSIONS

Internet education is a moving target.

Use of Internet by colleges and universities for delivery of distance education is one trend likely to continue. Unlike previous educational trends that were largely driven by research and tradition inside the academic community, use of the Internet for education is enthusiastically supported by powerful forces outside of academe. It is poorly researched, partly because there are no protocols for studying electronic education and also because it is a moving target. This is an entirely unique phenomenon in the evolution of education; it is mandating profound changes in the ways intellectual information is conceptualized, valued, learned, taught, evaluated, funded, governed, and codified.

Both advantages and limitations accrue to Internet learners, educators, and institutions. These phenomena must be deduced, however, because theory lags behind practice in this arena. Every advantage is measured against a concomitant disadvantage. Thus, for example, the economy of scale possible from classes offered to hundreds or even thousands of learners worldwide is balanced by the enormous costs of establishing and maintaining an infrastructure

to manage it. The advantage to learners of acquiring customized education at their convenience is offset by the need for expensive equipment to access frequently fragmented curriculum that often operates at a low level recognition and recall level. The intrinsic rewards to faculty of expanded access and new revenue sources is mitigated by a reward system that does not recognize excellence in technological and/or distance teaching.

None of the trends and issues in Internet education is well researched or identified. Currently, there are more questions than answers. This situation will continue for a long time because a) technological advances outpace the capacity of educators to evaluate them, b) the Internet is complex and new, and c) no one knows how to define and study the elements of online education. *What is it? What can it do? What is it doing?* These questions and more dominate a field that frequently resembles the plot from a science fiction novel.

REFERENCES

Mingle, J. R. (1995). *Vision and reality for technology- based delivery systems in postsecondary education*. Paper presented at the Governor's Conference on Higher Education; St. Louis, MO, December 7, 1995.

Quintana, Y. (1996). *Evaluating the value and effectiveness of Internet based learning*. London, Ontario; Graduate School of Library and Information Science.

Sherritt, C. A. (1996). A fundamenetal problem with distance programs in higher education. ERIC Document Reproduction Service (Report # ED 389 906).

Sherritt, C. A. (1993). *The hidden agendas of distance education*. MPAEA Journal of Adult Education, XXI, 2, 31-37.

BEST COPY AVAILABLE

Sell, G. R. (19960 1997). *Challenges in using technology for the improvement of undergraduate education*. Teaching Excellence, 8, 2. Laramie, WY; Center for Teaching Excellence.

Statewide telecommunications task force. Report and recommendations (1995). Tallahassee; Florida State Postsecondary Education Planning Commission.